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ABSTRACT

The Professional Development Schools Model (PDSM) allows universities and schools to work together at developing, implementing, and delivering meaningful professional development experiences for practicing educators. One such program is the Utah-Local Educators' Action Research Network (U-LEARN). U-LEARN is a 1-year, 8-credit-hour graduate course that focuses on action research and is taught on-site in schools. The program and course were developed by a team composed of three university-district liaisons and a university professor. A study sought to understand the influence of the U-LEARN class on teachers and classroom practice. The study, which lasted 2 years, used an action-research inquiry to describe the salient features and influences of a formal professional development program designed to develop a community of teacher/learners across three school districts. The study utilized questionnaires and focus groups and included kindergarten through 12th-grade teachers, as well as school administrators. The results show that many teachers who participated in the U-LEARN program reported thinking in new ways about their actions as classroom teachers and their roles as professionals. Teachers noted that the action-research process gave them a structured format for analyzing their teaching practices. Teacher participation influenced teachers' sense of validation, empowerment, confidence, and the perceived value of communication and collaboration. The U-LEARN Focus Groups Questionnaire is appended. (Contains 24 references and 4 tables.) (RJM)

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University-District Professional Development Program: A Systematic Study of Practice

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Introduction

The University of Utah Graduate School of Education began forming collaborative partnerships with Wasatch front school districts more than ten years ago. The primary purpose of establishing these relationships was to identify a number of Professional Development Schools (PDS) in each district for the specific purpose of enhancing preservice teacher programs and facilitating school-based research. More importantly, the PDS model allowed universities and schools to work together at developing, implementing and delivering meaningful professional development experiences for practicing educators.

In designing a professional development program for PDS sites, special care was taken to avoid ineffective approaches to traditional inservice wherein teachers typically receive information from "experts" in contexts separate from their classrooms and in ways that ignore teacher knowledge. The program organizers also took measures to avoid "top-down" approaches to staff development which presumed that information will automatically be transmitted from "expert" presenters to teachers and transformed from classroom practice to enhanced student performance.

The action research model as an approach to professional development was selected to create a venue through which teachers could examine practices within the context of their own school environments. Another goal was to provide educators with a useful tool which could be used to study practice in a systematic and collaborative setting. It is important to note that our purpose in selecting action research as a professional development model was not to infuse the process as a teacher change model. Instead, we found that action research provided a unique framework for professional development encouraging teachers to initiate an inquiry-based process and to explore issues that confronted them in the daily life of their classrooms. Moreover, we concluded that action research was, indeed, an interactive approach that combined expert information with practitioner knowledge in ways that directly impacted teacher thinking and promoted meaningful educational reform.

Background

During the last eight years, the professional development activities at the University of Utah's PDS sites focused on a Master's Cooperative Program (Co-op) in which a cohort of 25

experienced teachers (K-12) worked together for two years in an inquiry-based Master's of Education (M.Ed.) degree program. The PDS evaluation findings indicated changes in professional growth, empowerment and leadership as a result of the teachers' involvement in the Co-op program (Crow, Strokes, Kauchak, Hobbs, and Bullough, 1996). Additionally, the results demonstrated that several Co-op program elements were significant contributors to the teachers' professional development, including; (1) cohort format, (2) groups of teachers from the same school, (3) action research projects, and (4) courses taught on-site at the schools.

Given the lessons learned and evaluation findings from the Co-op experiences, we wanted to develop a similar program for teachers not interested in a two-year program culminating in a Masters degree. As a result, we designed a one-year, eight credit hour (quarter system) graduate course, taught on-site in the schools that focused on action research. Teachers from the PDS sites were encouraged to participate in small school groups. The course and program became known as the Utah-Local Educators' Action Research Network (U-LEARN).

The purpose of the action research course was to provide educators with the knowledge and skills to inquire and study their own teaching and/or school practice through applying inquiry strategies in a community setting comprised of fellow educators. Following this format, participants worked together and experienced interactions in which they served as both producers (that generated new knowledge) and consumers (that learned from others). The action research network covered four metropolitan school districts. The purpose of this network was to: (1) encourage the formation of collaborative work groups according to geographic location and similarity of inquiry/questions within districts; (2) expand to share knowledge and insights with other action researchers across the state; and (3) establish an on-line caucus to enable educators to communicate on a local, state and national level. Throughout the program these efforts were in place to assist action researchers with remaining focused in a particular direction, making practical improvements, and applying systematic inquiry techniques for taking action on an individual, collaborative, or school-wide basis.

The U-LEARN Course

The U-LEARN program and course were developed by a team composed of three university-district liaisons and a university professor. The liaisons serve as contract employees

with each district's Staff Development department and as the important link to the local University. In designing the content for the course, the team worked together in writing curriculum and preparing lesson plans for the year-long experience. By doing so, a similar content was followed and delivered weekly to the participants representing K-12 educators, counselors, and administrators in each of the four districts.

The eight credit hour course was organized into class sessions held throughout an entire academic year, beginning in October and ending in May. The first course was taught during the 1994-95 and each subsequent year. Participants opted to be involved as an individual or a school group interested in researching a similar topic. The course syllabus expectations were to: (1) attend class meetings at a designated, central location within the district boundary; (2) participate in weekly school discussion groups held at the respective school sites; (3) complete readings as assigned throughout the program; (4) develop researchable question for inquiry; (5) design and submit a school history and a literature review describing the context of the project; (6) develop and describe the means of gathering data; (7) conduct a thorough data analysis; and (8) apply evaluative strategies to be used in completing and compiling results of their studies.

In addition to program and course development, the U-LEARN team wanted to conduct their own action research project on the U-LEARN. The overriding questions focused on the influence of the course as a professional development component of the school and university collaboration. Therefore, the purpose of this study was to conduct an action research inquiry to describe the salient features and influence of a formal professional development program designed to develop a community of teacher/learners across three school districts including elementary and secondary levels.

Perspectives

Recent recommendations for reform in education have focused on university-school partnerships (e.g., Carnegie foundation, 1986; Goodlad, 1990; Holmes, 1990, 1995) as a means for renewing schools and improving teacher education. The Professional Development School (PDS) concept has received much attention (e.g., Darling-Hammond, 1994; Holmes 1995) and proponents assert "professional development schools are linchpins in the movement to restructure education.." (Darling-Hammond, 1994, pp. 9). While there are considerable

variations among the hundreds of PDS projects initiated throughout the world, several core characteristics have been identified (Abdal-Haqq, 1995; Holmes, 1986, 1990; Goodlad, 1993), including four general aims: (1) to upgrade preservice teacher education, (2) to improve professional development for experienced teachers, (3) to promote field-based research and inquiry; and (4) to restructure schools.

Although much of the PDS attention is centered on the aims of improving preservice teacher education (e.g., Darling-Hammond, 1994; Garner, 1996; Goodlad, 1993), little in-depth attention has been given to developing effective strategies for teachers' professional development in PDS settings. Often, the thrust of experienced teachers' education in a PDS comes through their interaction with interns or student teachers as they mentor and share their experiences as classroom teachers (Feldman, 1995; Ross, 1995). While this form of teacher development is important, it is limited and unlikely to produce reflective practitioners capable of shaping and promoting school restructuring as advocated by the proponents of the PDS model (Holmes, 1995; Little, 1993). Additionally, the typical inservice activities sponsored by universities and district staff development offices are not equal to the task of fostering long-term teacher growth and reflection (Saurino, 1996). Steeped in the traditional mode of teacher education, inservice usually emphasizes skills training and packaged programs for staff development. Absent from inservice education in a PDS, is what Giroux (1985) calls the "teacher as intellectual"; instead the model is "teacher as technician" (Little, 1993). Furthermore, Judith Warren Little (1993) argues "the dominant training model of professional development...is not adequate to the ambitious visions of teaching and school reform embedded in the present reform initiatives" (pp. 129).

Emerging from the recent teacher education literature is a growing body of research emphasizing "systematic and intentional inquiry carried out by teachers" (Cochran-Smith and Lytle, 1993) as the centerpiece of professional development. Inquiry based learning has been identified as instrumental in shifting teachers from dependency on external 'experts' to self-reliance in a context of systematic professional growth (Smylie and Conyers, 1991). The teacher education literature has begun to acknowledge the significance of action research as an inquiry based approach to professional development and school reform. There is a preliminary but growing body of evidence to demonstrate that providing teachers with skills in research methods

and applications promotes increased awareness of possibilities for effective school change (Black, 1996), helps them become more critical and reflective about their own practices (Oja and Pine, 1989), supports professional dialogue (Saurino, 1996), makes teachers feel more empowered and efficacious (McKay, 1992) and encourages teachers to attend more carefully to their methods; their perceptions and their approach to the teaching processes (Sagor, 1992).

There is strong consensus that in order for change to be effective and long-lasting it must have the involvement of those expected to carry out the change (Imber and Duke, 1984). Research done by teachers about their own classrooms and schools provides a powerful approach to professional development in ways that have the potential to impact school restructuring and reform efforts (Sagor, 1992) and contributes to the knowledge base in education (Cochran-Smith & Lytle, 1992). Cochran-Smith and Lytle (1992) claim that research conducted by teachers represents a distinctive way of knowing about teaching and learning. They also suggest that the unique features of teachers' action research is that their questions do not emanate solely from theory or practice, but from "critical reflection on the intersection of the two" (1992, p.6) presenting the possibility that this approach to professional development may be uniquely suited to PDS settings. With the "unprecedented demands for the development of teachers' knowledge and skills" (Smylie & Conyeis, 1991, p. 12), many questions concerning the impact of action research on individual teachers, school communities, and university-school partnerships still invite attention.

Methods

Over a period of two years, this study investigated an action research approach to professional development implemented across four urban school districts. The study was conducted utilizing two primary methods for qualitative research: questionnaires and focus groups (e.g., Glaser and Strauss, 1967; Miles and Huberman, 1984). The two phases corresponded to each programmatic year and its related investigative design. The subject descriptions, strategies of data collections, and methods of analysis is presented below according to the respective phase.

Phase I

The U-LEARN course was taught from January of 1996 to mid-June of the same year.

The inquiry design consisted of a pre and post questionnaire given to all participants. The purpose of the questionnaire was to identify changes in teachers' learning, perceptions, and classroom practices. The questionnaires were completed by 73 kindergarten through twelfth grade teachers and five school administrators. Out of the 84 informants, 43 people were elementary teachers or principals representing 24 schools, 13 junior high school teachers from five schools and 31 teachers from eight high schools (see Appendices I).

Analysis was conducted on the pre and post test questionnaires. Reliability measures showed strong internal consistency scores. In fact, The Chronbach's Alpha for the pre-test administration was .91. For the post-test administration, Alpha was .85. Both scores were very high and indicated that all items in the test were varying on the rest of the test. However, part of the reason for these high scores was the lack of variation in the responses on the items. Virtually everyone responded with high ratings on each item. This lack of variation indicated a problem with the scale's sensitivity to program effects.

A factor analysis was conducted to find a sensible factor structure underlying the test items. The analysis revealed a five factor solution that accounted for 57 percent of the variance. The extracted factors were: (1) use of action research, (2) peer relations, (3) collaborative environment, (4) attitude towards action research, and (5) leadership.

At this point in time, the research team investigated several possibilities as next steps in understanding the influence of the U-LEARN class on teachers and classroom practice. While test reconstruction was a viable option, the team chose to pursue a focus group strategy for the purpose of uncovering teachers' understandings of the class, the process, and impact. Furthermore, the team hoped to use the results from the focus groups in refining their future research directions.

Phase II

The U-LEARN course for this phase was taught from mid-October of 1996 to mid-May of 1997. The team used the factor analysis findings to guide them in the design of second research design. The research team designed a focus group strategy for the purpose of further assessing all participants' understanding in a short period of time. The participants were divided into the following groups: (1) elementary education teachers (32 informants from 14 schools)

and (2) secondary education teachers (13 junior high school teachers located in 6 schools and 17 high school teachers in 8 schools) [see Appendices II]. The focus groups were held in January which corresponded to the mid-point of the seven-month U-LEARN class. The groups met at the same time, in different rooms, and in the same building. Focus group leaders were selected from a pool of clinical faculty who were not U-LEARN course instructors. Each group leader used the same introductive instructions and leading questions. The focus groups were given 20 minutes per question. There were three general question areas with sub-category questions and a set of related probe questions [see Appendices III] . Each focus group was audio recorded and tapes were transcribed for analysis.

Analysis of the Phase II data was based on methods associated with the grounded theory generated (Glaser and Strauss, 1967). Independently, each of the four team members read the interview transcripts, and through a process of "constant comparative" (Glaser and Strauss, 1975) identified initial categories for analysis. From these categories, a matrix was developed that sought to reveal the existing relationships and themes. Once the matrix was finalized it was tested by rereading the interview transcripts, coding data and comparing the codings across team members' notes. All transcripts were independently coded on a separate sheet and codings were then compared for reliability. Differences were discussed and consensus achieved. Data categories were then collapsed and findings were written to present predominant themes and relationships in the context of teachers and schools. The themes that emerged were analyzed across and within the elementary and secondary teacher groups.

Findings

An analysis using 'constant comparative' (Glaser and Strass, 1967) methods revealed three overriding themes and several connective sub-themes. Teachers' thinking was a clear and dominant area emerging from the data. A second major category focused on changes in teachers' perceptions of themselves as professionals. The third theme illuminated in the data centered on collaboration and communication. This section of the paper is sub-divided along these three major finding areas.

Teachers' Thinking Patterns

Many secondary and elementary teachers participating in the U-LEARN program

reported thinking in new ways about their actions as classroom teachers and their roles as professionals. In this category, teachers noted that the action research process gave them a structured format for analyzing their teaching practices. This sub-area within the teacher thinking category was particularly dominant among elementary and secondary teachers. Many teachers noted they were using a more structured approach to thinking as a teacher. For instance, an elementary teacher stated:

> It gives a meaning for me . . . I've always been the type of person to question what I'm doing or question myself, and action research has actually (helped me) to see it all the way through. I will question myself and I will go through all of the steps so that I'll actually have a conclusion or a product or something decisive at the end of it. Whereas, often times I would just go on feel or I would think, you know, this is just gonna work . . . . Now I'm gonna go all the way through and so it's very meaningful for me.

The action research process taught to teachers throughout the project's class offered teachers a systematic approach to inquiring, reflecting, and changing teaching practices. As one secondary education teacher reported the action research process used in class presented a logical way of gathering information, ". . . you find out that its [research is] not that scary word because it's just so logical . . . if the process is in order, then it's amazing how those pieces just start to fit in that puzzle." An elementary teacher stated, "The action research (instructor) said, 'Ask the question. Make a plan. Do some research. Write,' you know, and so there they gave me the steps . . . ."

Furthermore, the logic of the action research process was particularly valued by teachers because it offered them structure. The action research process seemed to give the teachers patterned and logical methods of dealing with the demanding duties of daily classroom teaching. In using the action research process as a method for analyzing teaching problems, one secondary teacher stated that the systematic inquiry approach helped him/her; ". . . face 'em (problems). And they're not (overwhelming). I mean, there's a way of getting through it. There's a way of working through a process with . . . a purpose and a focus that I didn't have before."

Indeed, given the hectic life of teachers consumed with thousands of decisions regarding curriculum, teaching practices, students, and learning, several teachers noted they literally move

from one encounter to another without a systematic way reflecting about the consequences of their actions and decisions. Like many of his/her peers, this secondary teacher commented:

> I spend a lot of time solving a myriad of problems, a myriad of questions. And doing action research has been able to let me focus on just one thing at a time, and really study it out and figure out what it is I'm doing and what it is I've done, and look at possibilities for future, um, plans. Whereas before I probably couldn't because I have to do so many different things . . . lesson plans and department meetings and then you deal with the kid who's not working. So . . . its allowed me to focus on one issue at a time.

The words "focus" and "purpose" were common terms used by teachers' in their responses. Typical of teachers' comments, this elementary teacher stated; "it helps me to focus, to key in to what I'm trying to change in the school . . . get that process started and working into that." The action research process allowed teachers to focus on issues of importance to them. The focus of their thinking was guided by specific questions, calculated actions, and assessments. Said one elementary teacher:

> Well, when you gather the data and you organize it, you can see, usually, some kind of direction. And so, you know where it's going. Whereas a lot of times when you do something in the classroom, you just have a gut feeling about it or you see some success here or some failure here, but when you organize all that data, that makes a difference.

The teachers liked the concreteness of the action research process, and course's requirement to write descriptive papers. One secondary teacher noted; "this process . . becomes concrete. It's not just some abstract thing, 'Oh yeah, that worked last time but we don't remember until we hit that problem again'. But it's something concrete….". The same sense of focus and concreteness was exemplified by another secondary education teacher; ". . . being able to organize in a manner. It's on paper. It's on paper in an organized manner and so even if I do have to leave it and come back to it, I'm not coming back to going, 'Okay, now where was I?'. Things are down on paper."

Another salient element highlighted throughout the teacher thinking category was the importance of questioning and the use of questions. The questioning process embedded in the action research cycle created a focus in the teachers' reflective process. Indeed, the value of

questioning and questions may be that it directs the teachers to become focused on their teaching and student learning:

> The idea that asking questions is the important part of learning. So, by just asking our questions and hoping to find answers, I think that's what, help me to do to ask myself more questions, in order to find what it is I'm seeking . . . . The value of questioning, the value of . . . just that, if you, you can't ask the question really well unless you know the material. So I think the question is the key asking questions to find out why, where, how . . . ."

The action research process provided participants with a specific method for asking questioning about their teaching practices and themselves. Questions focused their desires, beliefs and practices. As beginning teacher reflected on the action research process, she/he noted:

> So that I'm teaching the way that I envisioned that I would teach before I even was hired . . . it keeps me honest. I mean, it keeps you honest . . . it's so easy for me to just let stuff start floating away ... I don't wanna say not caring, but taking the easy way . . . . I do that. I take the easy way. A lot. And so, action research has made me question certain things. I question things all of the time, but I don't always act on everything that I question, and so by acting on things that I'm questioning, by reviewing things that I learned when I was getting my credential, it's helped me stay true to my . . . goals in the very beginning. So, in that sense, I mean, it has...keeping me honest.

Another first year teacher also noted the influence of the questioning process on his/her ability to focus and connect various aspects of teaching to her actions. "I'm a new teacher also, and I would say that before I started teaching, I had every question. Like, I don't know what I'm doing, I have every question. I have all these ideas and all these theories . . . so now that I'm focusing on reading comprehension, now I know more what to ask. . . . ."

The questioning process seemed to excite teachers. Action research gave teachers a new perspective of themselves as professionals and they began to understand the value of questioning. Moreover, the questioning process seemed to help teachers feel a greater sense and empowerment by giving them a skill to use as a teacher and for viewing the world of professional teaching. A secondary education teacher reported; "It opens doors to, you start questioning everything that you do. It's not just one item, you do it, and you're done, you start

looking at everything that you do in education". The act of asking questions and reflecting on the data and subsequent answers sharpened the teachers' views of themselves and their classrooms. For example, one secondary teacher; "... it gives you a focus in what you're doing. You have a couple questions to deal with and then you focus your attention towards, uh, seeing what effects or what's going on in your classroom base or in your school based on those questions."

The structured format for analyzing their teaching and its effects on learning and students was emphasized again and again in the focus groups. There were many comments by teachers about the ability of the action research process to focus their thinking on learning results and students. For instance, one elementary teacher was particularly clear; "... it gives you a focus in what you're doing. You have a couple questions to deal with and then you focus your attention towards, uh, seeing what effects or what's going on in your classroom base or in your school based on those questions." Clearly, teachers linked changes in their classroom teaching practices to having used action research as a structured way of analyzing data related to student learning. Another elementary education teacher stated; "... it's made ... a difference in my teaching, because I feel like I can look at what I'm doing and I don't have to do a big scientific study, but I can try some things. I can take data on it ...see where we're going and if I'm seeing any changes."

The action research process created concrete questions, methods, data, and reflective points that provided teachers with a structured framework for linking their projects' findings to future research efforts. The action research process was viewed as a way of thinking as a teacher; an approach to being professional. Said one teacher;"We'll never be able to stop action research 'cause we'll never be done." This ability to see the structured analysis process leading to further inquiry efforts gave teachers a foundation upon which to build systematic inquiry into their teaching practices. The sense of continued professional growth was captured in a sequence of interactions recorded in the elementary education teachers' focus group:

> (teacher1): You know, I think too, it gives you a basis to grow on. Um, I mean, I'll take this research I'm doing this year and um…add to it next year and the next and the next, you know ... ten years from now I'll be a much better reading teacher.

(teacher 2): Absolutely!
(teacher 3): Sometimes, that's frustrating. Because you want to, I feel like I want to have all the foundation, and I'm only building reading comprehension foundation right now. Which is good and important, but, then I see how much more I have to do and should be doing and need to do in the future ...."

In sum, the teacher thinking category results suggested that changes in teachers' thinking may have occurred as a result of their participation in the U-LEARN course and process. Specifically, teachers reported becoming more reflective about their teaching strategies and more apt to apply structured analysis to their thinking about teaching. Participants also indicated an increase in the application of questioning strategies in their roles as classroom teachers and professionals. Finally, the teachers noted the importance of having concrete evidence in ability to think about their teaching and themselves as teachers.

Perceptions of Self As Teacher

The second dominant category emerging from the data analysis focused on teachers' changing sense of self as professionals and teachers. Teacher's participation in the U-LEARN course of study seemed to influence their sense of validation, empowerment, and confidence. Common teacher responses linked doing action research with generating knowledge about themselves and their teaching practices. The connections are illuminated by this elementary education teacher's focus group comment; "I think it (action research) makes it so open that there's no wrong answer. It leaves you free to think for yourself. It gives you a greater sense of responsibility. You take the action for being responsible and therefore what you do".

Validation as a teacher and a professional was an important and telling thread running through the teachers' responses describing their growing sense of self. Elementary and secondary teachers reported feeling more validated because of their use of action research. Furthermore, teachers often remarked that with their increased sense of validation came strong belief of professionalism and heightened pride in themselves as teachers. Below is one example from the secondary education focus group conversation among three teachers:

Teacher #3-- Action research helps to remind us, although everybody tries to help us forget, that we are professionals.
Teacher #2-- Mm-hmn. That's right.
Teacher #3-- And I think, you know, sitting around and talking with your colleagues

and expressing our ideas and coming up with things and brainstorming and realizing, you know, how brilliant you really are, I mean, that helps you realize that you are a professional.

Teacher #4-- You don't have as many keys to places as the custodian . . . .

Teacher #3-- But you're still a professional.

Action research provided teachers evidence that confirmed who they were as teachers and validated what they were doing in their classrooms was right. Several teachers commented that their projects' findings indicated that they were doing well as teachers. Action research became a form of self-evaluation and provided evidence from sources beyond their principals' assessments. The information validated teachers' sense of self, their beliefs, and their teaching practices. For example, one secondary education teacher explained: "maybe it helped us to see the tip of the iceberg and how, how we can do things differently in many areas and many aspects of our job. So I think its good. I think its positive. Its been self-evaluation in a positive sort of way."

Several times, teachers comments linked the self-evaluative nature of action research with gained insights and increased self-awareness. The self-evaluation process gave the teachers new information and insights about being a teacher and their potential as a teacher. For instance, one teacher remarked:

> . . . in thinking about my project, I kind of validated myself because I began to see, perhaps, what some of my capabilities were. It caused me to be more reflective about myself, about what I wanted to accomplish, about how I was doing things. I thought, 'Gee, I could do that. I could that. Well, then I could try this," and then when I began to, you know, think, 'you're not a dumb head. You're coming up with some really good stuff here and now . . . and so I think it is a very reaffirming process.

The action research process gave teachers the skills to evaluate their teaching practices and themselves as teachers; "maybe a methodology in doing it, and a way of validating what we're doing or helping us to see where we can do these things."

The power of the validation was based on meaningful knowledge and was not associated with external sources or people. The action research process gave teachers tools and skills to generate knowledge about themselves and their teaching practices. Moreover, the self-generated knowledge was powerful in that it may have caused teachers to feel more empowerment. Frustrated with a lack of school support for teachers in the school, one secondary teacher

explained:

> I have begun to feel more and more that I am autonomous. And, if I need to be validated, I have to do it, and if I wanna feel powerful, I have to find out how to do that. And, if I have the need to feel in control of my class, I have to fulfill that, but I'm not gonna get that from anybody else.

The sense of empowerment was born from a context in which teachers believed that they have little power. Often, teachers described their increased sense of power and empowerment by contrasting their sense of powerlessness. For example, this secondary education teacher noted:

> "I think it makes you feel more powerful . . . I feel like I have no power, and this (action research) helps you feel a little bit more control and a little bit more power. I mean, I have physical control of my classroom, but just feel, that there are other things involved in teaching . . . which you have absolutely no control over, and this, at least, gives you the feeling of control".

In a very interesting way, and for many teachers, their participation in the action research process gave them a sense of control and, therefore, a more powerful sense of self as teacher.

Teachers' responses also highlighted another attribute leading to their growing sense of empowerment; the linkage of gaining and sharing meaningful ideas. These weren't shallow nor whimsical notions. Rather, the ideas were powerful because teachers were studying and reflecting upon their teaching practices using new and informative data.

Teachers' participation in the action research process seemed to enhanced teachers' professional perspectives by creating a new level of excitement about teaching and themselves as teachers. In the focus groups' responses, the word excitement was a frequently used to describe their new enthusiasm about being a teacher. Even more revealing in the teachers' responses, the informants frequently associated their excitement with new found skills and abilities as informed change agents in their classrooms: ". . . that's part of the action research, that's part of what makes it exciting is, that somebody is doing something innovative, and . . . saying, 'What kind of innovative things are we doing that's going to make our little world better, by doing it?'. Teachers' excitement was also increased because they were learning new things about themselves as teachers and their students. For example, one secondary education teacher reported:

> . . . the surveys came back and I learned something that I had no idea I would learn. I hadn't designed the survey to learn that, but it glared up at me. And what

> I thought was the problem, wasn't the problem. And it was really fun to go to Bonnie and say, 'Guess what?'. It was exciting and it was new--it was. It wasn't, 'This is my project'. It thought, 'I learned something I didn't anticipate finding'.

Often teachers' excitement and empowerment were linked with a strong sense that they could make a difference in their classrooms and schools. Furthermore, they developed skills and tools to assess their degree of influence. Indeed, and the teachers could begin to understand the strength of their influence and their power. One elementary education teacher stated; "Action research really keeps your mind active and keeps it growing and moving. It doesn't let you stale out. I think that it works ... action research, you're doing it, you're changing things. It is making things happen at the time."

Teachers' sense of empowerment was clearly linked to their ability to embrace change and to see that they were making a difference. An elementary teacher explained his/her sense of empowerment felt during participation in one of the action research classes:

> Sitting in action research class, I was powerful. I was able to see how her (actions research project) made a difference and how I could move out and make a difference. I'm right now on the social studies adoption committee, and I have been empowered with this ability to ask a question or to point or to guide the people on these committees to ask these important questions that push us out into that web that connects with the world.

The action research process provided the teachers with concrete evidence about change and influence. This evidence was something that could be viewed and shared with other teachers, in fact, other teachers could see the evidence. As a result, influence wasn't reported as fantasy or story; it was data. Again and again, teachers linked a growing sense of self as a agent with feelings of empowerment based upon concrete evidence. For instance, one elementary teacher noted: "Well, like what I was saying about expertise. It makes you feel like you have an idea about something and you validate it in the classroom and you know it works . . . and you also have research and literature that ties right in with what you're doing."

In summary, the second category identified as teachers' perceptions was also a dominant theme emerging from the data. Overall, teachers reported stronger perceptions of themselves as empowered professionals able to feel more control over their lives as hectic teachers. This may

have occurred because their involvement in the action research process brought them in touch with concrete information about themselves as teachers. The teachers perceived themselves as more professional because they could identify linkages between themselves with systematic study and deeper understandings about life in their classrooms. Validation and confidence seemed to go hand-in-hand with more secured feelings about being professionals.

Collaboration and Communication

The third major theme that emerged from the data analysis centered on school collaboration and communication. These concepts were scattered across an array of settings and participants. Unlike the areas of teacher thinking and empowerment, this topical theme was less consistent throughout the U-LEARN participants responses.

Specifically, elementary and secondary teachers differed on what constituted meaningful collaboration and communication. Additionally, the two school groups had contrasting perspectives on their participation in the weekly U-LEARN classes. Furthermore, while secondary teachers were far more likely to acknowledge the positive relationship between their action research projects and collaborative interactions within their schools, elementary teachers discussed the importance of sharing ideas. However, elementary teachers discussed their reluctance to discuss their action research projects with non-U-LEARN participants in their schools for fear of being tagged as "uppity". The purpose of this section is to outline the findings relevant to collaboration and communication.

While the dominant theme was highlighted in elementary and secondary education teachers' focus group responses, talk of collaboration and communication was a more frequent topic among secondary education teachers. Some of the strongest responses came from a group of six junior high school teachers who worked together on the same action research project. Their perspectives provided powerful insights into the issues of collaboration with a common project. Speaking about collaboration, one informant said:

> I think it's invaluable, the collaboration that comes between teachers . . . when we began our project, there were representatives from every walk of life, so to speak; resources, special education, and media and math . . . all of these different areas. And we came together, identified problems within our school, and worked together on some kind of solution or some kind of plan. And I think that

> experience, in and of itself, is really invaluable. Much more so than just reflecting on your own teaching at the end of the day because, you get a different perspective and you get, you know, other forms of input. So I think, if anything, the collegiality that it creates is very important.

Other teachers in the junior high school described the school structure and collegial interactions that were created by working together on the project. A community of learners was developing as a result of the teachers working together to achieve action research objectives and group goals connected to problem identification and data collection. Additionally, this community of learners also became a community of caring people. One group member described the community interaction this way:

> I think there's some care monitoring too, where if we are working together and her day's like, 'Oh, action research is the last thing I want to worry about today,' and (he) goes, 'Hey, we need to meet! Let's come in second period,' okay. And then we get refocused. And so, I think that otherwise . . . this little action research project could take me years, but, keeping one another focused and with a common goal in mind . . . really keeps you going straight ahead.

Interestingly, having several teachers within a very large high school who were working on different action research projects also generated a new kind of communication pattern within the school. The commonality of doing action research created a bond among the U-LEARN participants in that school. One teacher commented:

> It just gets you to start talking with other people in your building. Or other people that you associate with that might have a common interest . . . even, if the projects aren't the same ... there's some common link there that even that gets you out of your classroom and talking to each other.

Other secondary teachers scattered throughout a number of schools agreed that working with U-LEARN peers in their school sites was very valuable. Many of these teachers also recognized the importance of the "working together". They defined "working together" to mean, sharing ideas about their projects, discussing progress on certain class assignments, and encouraging one another when frustration was staring them in the face. "I know . . . Karen and I have kind of started working more together and, we work, have a focus and we keep one another going or maybe she keeps me going more than more than I do, but working together keeps us

both going".

Many secondary teachers believed that the most powerful format for generating collaboration and support among them came in small, one-on-one interactions among school peers participating in the action research projects. Again and again, teachers reported that having someone at the same school site was an invaluable component in stimulating collaboration. A preponderance of teachers believed that meaningful collaboration involved friendly working relationships in which excitement and spontaneity were the defining characteristics. For example, in one large high school six teachers met together to discuss their action research projects. While this arrangement was helpful, the most meaningful communication pattern was:

> We've had the meetings at (Cross Woods High School) with the six of us, and even that's hard and that's a small group. I would say most of the help I've had with my project, most of the insight I have gained, collaboratively, has been with Bonnie at the football game, taking tickets. Or, in the faculty room with one of the other members from the school. It hasn't been something like, 'Okay we're gonna meet together and talk about.' It hasn't been that way. And I would say probably one percent of the help has come from that.

For many teachers, the collaborative spirit meant having someone on-site to talk about their projects; someone who understood the action research cycle and could sympathize at frustrating moments in the process. Sharing ideas and feelings was key for almost all of the teachers. One illustrative comment was:

> I know the collaborating that's been fun for me, besides, 'Okay I'm frustrated, now what?', has been the being able to share . . . the more you talk about it, the more you open yourself to questions. The more you open up, people give these suggestions. Sometimes they're helpful, sometimes they actually draw you back to the drawing board. But the more you talk about it, the more feelings you bring up about your topic, (and) the more you'll understand it, (and) the more you're able to handle it and then maneuver with it.

Analysis of the elementary teachers' focus groups revealed a very different perspective on this collaborative sub-theme. The findings revealed that elementary teachers valued "sharing ideas" and talking with each other rather than the "working together" topics found in the secondary teachers' data. Elementary teachers believed that communication among fellow

U-LEARN participants within the class and within their schools allowed them to glean new teaching ideas from one another. Representative of these responses, one elementary teacher noted:

> . . . mostly what it's done for me, is allowed me to get other teacher's ideas, by our meetings and the things that we talk about. And so, it's really given me a lot of ideas, things to think about and things that I can do to help, just be a better teacher on a daily basis in class.

Additionally, elementary teachers reported benefits from meeting together on a weekly basis in the U-LEARN classes. Unlike the secondary teachers, who reported that the class was too big to support meaningful collaboration or communication within school teams or across school sites, the many elementary teachers reported that they liked listening to teachers from the other schools. One elementary teacher explained:

> . . . I think a lot of times you get in the boat and you think you're the only one at sea. And it's nice to know that there's lots of other people that are on that same sea. Even though they may not be from your school but there's people that wanna change some things and find a new direction or find a new plan to go about things. And that's nice, because every week you can see what's happening elsewhere . . . you're not in your classroom, you're outside of the classroom.

Actually, the elementary teachers identified a number of benefits of the weekly U-LEARN classes. It appeared that for many teachers meeting and sharing with teachers across schools and districts allowed them the extend the boundaries of the community of learners. Again, moving away from the more 'collaborative' theme reflected in the secondary education teachers responses, the elementary teachers found the class increased opportunities for more meaningful communication. For example, one teacher noted:

> I think . . . that it's nice to be able to just have people in your same class, 'cause most of us aren't from the same school. I mean, two of us are from the same school, but I think it's nice to be able to see (Sue) at a different workshop . . . at some kind of . . . district thing and know that she's doing action research, and then we automatically have a connection. And, maybe if she's standing next to a teacher in her same school, then we would start a conversation . . . . I'd feel comfortable (because) I'd already have a connection. I think, in that way, it's nice to feel connected to people throughout the district, not just in your little pocket of the universe.

However, most secondary education teachers believed the weekly U-LEARN class was

non-productive in terms of stimulating meaningful collaboration among class participants. These teachers saw little commonality among even fellow secondary teachers, particularly those teachers from different school districts and communities. The secondary teachers' responses were clear and sharp as exemplified by these three teachers:

(#10): I don't even know if it (collaboration) would be valuable because we all come from such very different schools and very different. (Johnson Junior High School) is a world away from (Cross Woods High School).

(#11): because it's tough ... but every time, in class, when it's, 'Okay, now it's the collaboration time,' that's the time when I go, 'This is the least helpful to my project right now'.

(#6): I think, because our projects, generally, are so individual to our own classrooms . . . I haven't made any connections outside of (Cross Woods) High School . . . . But as far as action research making any connections, it's very limited, because, my question doesn't depend on collaborating with someone else for results.

Another sub-theme that emerged in this dominant theme area focused on some elementary teachers reluctance to discuss their action research projects with non-U-LEARN participants. For example, one first-year teacher explained:"On a negative note, I kinda don't talk about it (action research) very much . . . and as time has gone on I have just been less and less vocal about it because . . . it was kind of like tooting your own horn . . . and I don't wanna do that."

Later on in the focus group discussion, this beginning teacher further explained her sense of empowerment as a result of her involvement in action research. However, she was gaining professional wisdom about school cultures, when she commented: "I feel good about myself, and I don't wanna go flaunting that kind of thing around because I don't want to alienate myself from my peers and I need their help on a lot of things. And I don't wanna do that."

However, among secondary teachers, several informants noted that non-U-LEARN participants in their schools were interested in hearing about their projects and encouraged their U-LEARN participation. In one high school, many of the faculty were knowledgeable about the concept of action research and the U-LEARN class, and non-participant support seemed higher. Two high school teachers from the same school reported:

(#3): . . . 23 of our faculty (received inservice education) in action research.

And out of that 23, six of us took the course . . . even those who weren't in (the inservice presentation) . . . .

(#4): They're still interested in what's going on.

(#3): Well yeah. It opened up from being departments, into being a faculty. And so, even when you're not directly involved in a project, if you say action research, it's kind of a buzz word, 'Oh, I know what you're doing. That sounds interesting to me.' And, over time . . . you know, like I said, this teacher that I'm team teaching with, is not in (the U-LEARN class) but she has gone through the (inservice presentation) . . . so she's aware of it. So, it wasn't hard for her to say, 'Well of course. Let's do it.' And so, I see where it's made us more of a team, and , even though we are so different in what we're doing.

The final sub-theme emerging within the collaboration and communication topic area focused on action researchers interaction with their school principals. Both elementary and secondary teachers described principals who were supportive of their action research endeavors. Additionally, some informants reported that their administrators lacked a sense of understanding and encouragement. Secondary teachers had several very descriptive passages detailing their principals' interactions. One teacher described an emotional interaction with his/her principal:

> I went to an administrator with great enthusiasm . . . and I thought, you know, 'This is exciting, because this is something we can do,' . . . and I told him, . . . 'This is just really great . . . .' He says, 'So why do teachers need to be validated?' . . . It just blew me away. It literally blew me away. I did not know how to respond . . . . Maybe I'm wrong. But that really hurt me that he couldn't understand why . . . . But, for me, it makes me feel good. I don't care what it does for the person next door, as much as what it's doing for me.

However, several secondary teachers from a particular junior high school described their principal's reaction to their action research projects as very positive. They described the principal was a very reflective person interested in school improvement through the reform of curriculum. Explained one of the teachers; "I think she applauds us in our efforts to do things better". Another of the junior high school teachers described the principal's support this way; "She's concerned with curriculum too, and sees that as one of her major . . . responsibilities . . . . As we work on projects that impact that, then she's really interested."

The clear consensus among elementary and secondary teachers was that support for action research projects within the school was dependent upon the personality of the principal.

Both groups knew of supportive principals and negative administrators in regards to action research projects; and these principals were generally supportive of their teachers.

Conclusion

The findings of the study are initial at best, however, they do show emerging themes worthy of further investigation. Specifically, three general themes were identified in the focus group respondents.

First, many U-LEARN participants indicated they were thinking in new ways about their actions as classroom teachers and their roles as professionals. Teachers noted that the action research process gave them a structured format for analyzing their teaching practices. The logic of the action research process was particularly valued by teachers because it offered them structure. The action research process seemed to give the teachers patterned and logical methods of dealing with the demanding duties of daily classroom teaching. Teachers noted that the action research process allowed teachers to focus on issues of importance to them. The focus of their thinking was guided by specific questions, calculated actions, and assessments. Additionally, the teachers liked the concreteness of the action research process and course's requirement to write descriptive papers. The action research process provided many of the teachers with tangible questions and data that they could reflect upon and share with other teachers. Another salient element highlighted throughout the teacher thinking category was the importance and use of questioning and questions. The questioning process embedded in the action research cycle created a focus in the teachers' reflective process. Indeed, the value of questioning and questions may be that it directs the teachers to become focused on their teaching and student learning.

The second major theme focused on teachers' changing sense of self as professional teachers. Teacher's participation in the U-LEARN course of study seemed to influence their sense of validation, empowerment, and confidence. Common teacher responses linked doing action research with generating knowledge about themselves and their teaching practices. Validation as a teacher and a professional was an important and telling thread running through the teachers' responses describing their growing sense of self. Many teachers described feeling more validated because of their use of action research. Furthermore, teachers often remarked that with their increased senses of validation came strong senses of professionalism and heightened

pride in themselves as teachers. Additionally, the teachers reported feeling more empowered as teachers and professionals as a result of their participation in the course.

The third emerging category centered on collaboration and communication among participants in the course and with U-LEARN peers in the same school. Here, the data indicated that elementary and secondary teachers viewed this topical area differently. Secondary teachers were more likely to value same school collaboration when needed. However, elementary teachers were more likely to value the conversation and idea sharing among class participants.

Cautions

While the study's findings are intriguing and reflect a possible influential professional development model, the results should be viewed in their appropriate investigative context of initial findings and emerging themes from focus group respondents. Several design and data cautions should be considered about the findings.

First, the findings are initial at best and point the research team into further inquiry areas. It should be remembered that the focus group format was used as a follow-up strategy to skewed pre and post questionnaires given to the "first-year" U-LEARN participants (Phase I). Given a factor analysis of the questionnaires, several potential topical areas emerged that needed further investigation and deeper understandings of the participants' perspectives. The extracted factors were: (1) use of action research, (2) peer relations, (3) collaborative environment, (4) attitude towards action research, and (5) leadership. Of these factors, only the leadership category failed to fully materialize the focus groups analysis (Phase II), and participants' attitudes towards research was apparent but not a dominant theme. This may be due to the fact that the questions asked during the format did not elicit the information and/or the participants did not view any significant contribution of the U-LEARN course experiences to their leadership roles.

However, analysis did help to clarify several of the extracted factors. Specifically, the study's findings indicated a possible significant contribution to teachers' thinking and the ultize action research to focus thinking, create a structured format for analysis of teaching practices, and devise a strategy for reflective inquiry. This is an important and interesting finding that needs to be further examined by the research team. Furthermore, little is known about whether the teachers continued to use the new thinking approach throughout the class.

Moreover, the focus group respondents provided further elaboration and understanding about the complex and enigmatic nature of collaboration, especially within the elementary and secondary school cultures. The findings may suggest that it is important to have at least three teachers from the same school attending the class. The cohort approach may create more interaction among teachers engaged in the action research process and therefore generate more reflective inquiry practices while at the same time strengthening community ties within school sites.

Second, it should be noted that the timing of the focus groups within the overall year-long course creates several interesting factors. While the course started in mid-October of 1996 and continued through to mid-May, 1997; the focus group format was held in January of 1997. The U-LEARN course participants had only completed about 40% of the course by the time they were brought together for the focus group session. Therefore, the nature of the data is preliminary at best. While the study's findings are informative, the research team cannot say how U-LEARN participants viewed the action research process and course at the end of the seven-month experience. This timing variable raises many questions about the contribution of the course. Would the strength of the three emergent categories be evident at the end of the course? Are there latent factors and understandings that would be illuminated within May and not January? Did participants feel obligated to respond favorably to the focus group questions because they were involved in a graduate course and a resulting grade in May? Unfortunately, these questions will remain unanswered because there were no further investigative strategies used after January's focus group format.

Although the study's design was preliminary, and the data analysis categories emergent, the findings do encourage further investigation into the influence of the U-LEARN format as a viable form of professional development. Specifically, the research team wants to conduct a series of focus groups and/or structured interviews at salient points along the year-long course of study. In that way, a deeper, more complex and complete understanding will be developed. The inquiry would focus on the three major categories, yet be open to other themes and perspectives. Furthermore, it would be interesting to track program influence and teacher growth for a similar group of teachers involved in more traditional forms of the district inservice activities. Does the

U-LEARN experience encourage certain types of professional development and teacher change factors? What elements of the course organization, content, and structure are salient for meaningful professional development?

Additionally, the research team is interested in developing more quantitative measures of program influence and teacher growth. A search of the literature in action research, inquiry, professional development, and inservice education did not a reveal reliable and valid instrument appropriate for our situation. Designing a good pre-post questionnaire would be important for U-LEARN leaders, district staff development directors, and teacher educators.

Finally, neither Phase I nor II of the study's design specifically investigated program design features such as curriculum, teaching strategies, structure, organization, and incentives. Therefore it is unclear which aspects of the program may be influential in the emerging categories captured in the focus groups responses. While general program evaluation data was collected, further examination into this area is necessary and relevant in developing significant program elements. Furthermore, this data should help teacher educators at all levels design and implement meaningful professional development experiences.

Implications

While it is speculative at this point in time, the U-LEARN program does provide insight into a interesting model for professional development that may be able to influence teachers', teaching practices, and school collaboration. Moreover, while many questions remain about the data and research design, the study's preliminary findings are consistent with calls for more inquiry-based models of professional development. Several key program elements are worthy of further and fuller consideration.

Specifically, a cohort format is salient, allowing teachers within a school to form a mini-community, and yet interact with teachers from other PDS sites. Also, the use of an inquiry-based approach across a year period of time provided teachers with the skills, encouragement, and opportunities to be reflective about their teaching practices and schools.

These U-LEARN program features are consistent with the principles of professional development called for by Little (1993) when she noted that educational reform will not occur until the model of professional development moves from a training inservice approach to an

alternative paradigm. The U-LEARN exemplified many of Little's professional development principles. The program had a cohort format that, offered "meaningful intellectual, social, and emotional engagement with ideas, with materials, and with colleagues . . . " (pp. 138). The preliminary data suggested that teachers believed they were engaged in meaningful pursue of knowledge by being generators of their own understanding of teaching. The strongest data supporting this sense of an engaged community of learners came from groups of same-school participants. The secondary teachers were more likely to fall into this small group arrangement, and the data illuminated their stronger sense of community and collaboration around the action research process and their projects.

Second, the course helped teachers understand their own personal and school histories (Bullough & Gitlin, 1995), and then stimulated them to pose questions and inquire about their own teaching. Consistent with Gitlin et al., (1992), Little (1993) recommended that for professional development to be meaningful it must "take explicit account of the contexts of teaching and the experiences of teachers . . . afford teachers a means of locating new ideas in relation to their individual and institutional histories, practices, and circumstances" (pp. 138).

Third, Little stated professional development must employ the means and perspectives of inquiry which were central to the U-LEARN program. The study's results were consistent with Little's and others (e.g., Barth, 1992, Bullough & Gitlin, 1995) pleas that inquiry "acknowledges that the existing knowledge base is relatively slim and that our strength may derive less from teachers' willingness to consume research knowledge than from the capacity to generate knowledge and to assess the knowledge claimed by others" (Little, pp.139). If Professional Development Schools are only as good as the teachers in those schools, then strategies for teacher development should promote and enhance teachers' abilities and opportunities to renew those schools.

The results of this study should begin to suggest effective principles of professional development and corresponding program curricula needed to encourage sustained teacher growth and school renewal. The challenge for the teacher education community will be to establish graduate programs and other professional development packages that take advantage of these emerging principles of professional development.

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Attachment I

Phase I: Number of Participants

Type of Educator	Davis School District	Granite School District	Salt Lake City School District	Murray School District	Sub-Totals
Administrators	1	4	0	0	5
Teachers in High Schools	0	4	7	2	13
Teachers in Junior High Schools	8	17	6	0	31
Teachers in Elementary Schools	16	13	8	1	38
Sub-Totals	25	35	21	3	84

Phase I: Participant Schools

Schools	Davis School District	Granite School District	Salt Lake City School District	Murray School District	Sub-Totals
High Schools	3	2	2	1	8
Junior High Schools	2	2	1	0	5
Elementary Schools	10	10	3	1	24
Sub-Totals	15	14	6	2	37

Attachment II

Phase II: Number of Participants

Type of Educator	Davis School District	Granite School District	Salt Lake City School District	Murray School District	Sub-Totals
Administrators	0	0	0	0	0
Teachers in High Schools	10	5	0	2	17
Teachers in Junior High Schools	5	8	0	0	13
Teachers in Elementary Schools	13	10	7	1	32
Sub-Totals	28	23	7	3	61

Phase II: Participant Schools

Schools	Davis School District	Granite School District	Salt Lake City School District	Murray School District	Sub-Totals
High Schools	4	3	2	1	10
Junior High Schools	2	2	1	2	7
Elementary Schools	5	8	3	0	16
Sub-Totals	11	13	6	3	29

Attachment III

U-LEARN: Focus Groups for 21 January 1997

Questions and Instructions

Instructions: Please note to the participants that the questions will be general. However, we would appreciate responses to be specific, and examples would be wonderful. Each question should be about 20 minutes.

1. Since your involvement in the U-LEARN course, has the program had an influence on you as a teacher?

   What types of influences?

   Ticklers/Probes -- Perceptions of your role(s) as teacher
   Perceptions of your role(s) as colleague
   Views of research and the use of research
   Classroom teaching practice
   School practices

2. Has your involvement in the program/course influenced your interactions/relationships with fellow teachers in your school? School administrators?

   How?

   Has your involvement in the program/course influenced your interactions/relationships with teachers outside of your school?

   How?

   Ticklers/Probes -- Has doing action research created new and/or different alliances in your school?

   Has doing action research created new and/or different alliances outside of your school?
   How do your fellow teachers view you and action research efforts?

3. Has your involvement in the program/course influenced your thinking or attitudes or feelings or perceptions about yourself as a professional?

   How?

   Ticklers/Probes-- Your confidence level?
   Your sense of empowerment?
   Your decision-making strategies?
   Your thinking as a teacher?
   The way in which you communicate with other teachers, administrators, and parents?